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REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 2186

Port of Mohe Date of First Survey 5 Nov Date of Last Survey 14 Dec No. of Visits 9
 No. in Reg. Book 106 Built at Mohe Port belonging to Mishunomiya
 Owners Yatsunuma Risen K. K. By whom The Mitsubishi Dry Dock Co Ltd When built 1917
 Yard No. 69 Electric Light Installation fitted by The Mitsubishi Dry Dock Co Ltd When fitted 1917

DESCRIPTION OF DYNAMO, ENGINE, ETC.

one 12 kw. D.C. Compound are coupled with single cylinder vertical
type high speed engine located in engine room.
 Capacity of Dynamo 12 kw. Amperes at 100 Volts, whether continuous or alternating current Continuous
 Where is Dynamo fixed 1st platform in starboard engine room Whether single or double wire system is used Double
 Position of Main Switch Board 1st platform in starboard engine room having switches to groups 4 circuits of lights, &c., as below
 Positions of auxiliary switch boards and numbers of switches on each one sub main board for bridge light and
one distributing board fitted
at fore-castle, entrance Saloon, Saloon pantry, passage of engineers & officers room and poop deck.
 If fuses are fitted on main switch board to the cables of main circuit Yes and on each auxiliary switch board to the cables of auxiliary
 circuits Yes and at each position where a cable is branched or reduced in size Yes and to each lamp circuit Yes
 If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits Yes
 Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 50 per cent over the normal current
 Are all fuses fitted in easily accessible positions Yes Are the fuses of standard dimensions Yes If wire fuses are used
 are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit Yes, the porcelain clip mounted to
 Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases Yes, the porcelain clip mounted to
 Total number of lights provided for 141 arranged in the following groups :-
 A Bridge deck lights each of 1406 candle power requiring a total current of 49.21 Amperes
 B Fore-castle lights each of 256 candle power requiring a total current of 8.96 Amperes
 C Engine room lights each of 528 candle power requiring a total current of 18.48 Amperes
 D Cargo cluster lights each of 1536 candle power requiring a total current of 53.76 Amperes
 E Mast head light with 2 lamps each of 32 candle power requiring a total current of 2.24 Amperes
Side light with 2 lamps each of 32 candle power requiring a total current of 2.24 Amperes
4 cargo lights of 32 candle power, whether incandescent or are lights nitro lamps 12 Amps.
 If are lights, what protection is provided against fire, sparks, &c. no.

DESCRIPTION OF CABLES.

Where are the switches controlling the masthead and side lights placed at Chart room on flying bridge deck.
 Main cable carrying 142.4 Amperes, comprised of 37/16 wires, each S.W.G. diameter, 1/16 square inches total sectional area
 Branch cables carrying 49.21 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, 0.033 square inches total sectional area
 Branch cables carrying 8.96 Amperes, comprised of 7 wires, each 18 S.W.G. diameter, 0.029 square inches total sectional area
 Leads to lamps carrying 2.8 Amperes, comprised of 1 wires, each 16 S.W.G. diameter, 0.032 square inches total sectional area
 Cargo light cables carrying 53 Amperes, comprised of 19 wires, each 16 S.W.G. diameter, 0.033 square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

Cables insulated with pure india rubber, 3 coats vulcanized, rubber
coated tape and braided cotton which is immersed to solution of the gutta-percha
and protected by an galvanized steel armoured wires.
 Joints in cables, how made, insulated, and protected our distributing system are not directly branching
or leading to lamps. These wires and cables jointed by brass or copper
terminals which is based porcelain and protected with cast iron bridle covers.
 Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances Yes Are all joints in accessible
 positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage Yes
 Are there any joints in or branches from the cable leading from dynamo to main switch board no.
 How are the cables led through the ship, and how protected Cables are lead through the iron bulk head
or beams. Protection are not ready for armoured cables, but for the vulcanized
wires are protected by iron tube or wooden maulding.



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible Yes.

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture galvanized iron tubing.

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat iron tubing or moulding.

What special protection has been provided for the cables near boiler casings exposed armoured cables.

What special protection has been provided for the cables in engine room ditto.

How are cables carried through beams ferrules or fibre tubing through bulkheads, &c. W.P. bulk heads, brass stuffing box for

How are cables carried through decks galvanized iron deck tubes.

Are any cables run through coal bunkers no or cargo spaces Yes or spaces which may be used for carrying cargo, stores, or baggage Yes.

If so, how are they protected galvanized iron tubings.

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage no.

If so, how are the lamp fittings and cable terminals specially protected no.

Where are the main switches and fuses for these lights fitted fitted on the upper deck.

If in the spaces, how are they specially protected no.

Are any switches or fuses fitted in bunkers no.

Cargo light cables, whether portable or permanently fixed portable. How fixed fitted in a passage of upper deck.

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel no.

How are the returns from the lamps connected to the hull no.

Are all the joints with the hull in accessible positions no.

Is the installation supplied with a voltmeter Yes, and with an amperemeter Yes, fixed on main switch board.

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas no.

Are any switches, fuses, or joints of cables fitted in the pump room or companion no.

How are the lamps specially protected in places liable to the accumulation of vapour or gas all lamps is covered with glass globes.

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than 600 megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

N. Leo.

Electrical Engineers

Date Jan. 1918

COMPASSES.

Distance between dynamo or electric motors and standard compass

Distance between dynamo or electric motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	feet from steering compass
A cable carrying	Amperes	feet from standard compass	feet from steering compass

Have the compasses been adjusted with and without the electric installation at work at full power

The maximum deviation due to electric currents, etc., was found to be _____ degrees on _____ course in the case of the standard compass and _____ degrees on _____ course in the case of the steering compass.

KOBE WORKS, MITSUBISHI, ZOSEN KAISHA, LTD.

M. Parki

Builder's Signature. Date

GENERAL REMARKS.

General Manager.

The installation has been fitted in accordance with the Rule requirements & worked satisfactorily on trial

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

W.D. 3/4/18

Arthur L. Jones

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI APR 5 1918